

»Features

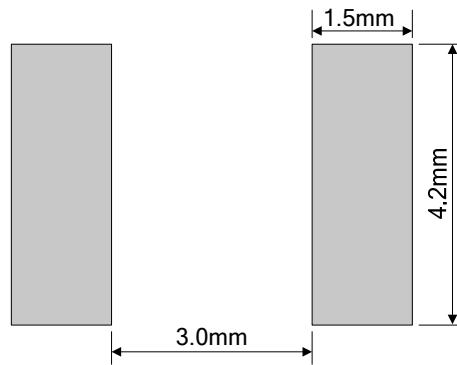
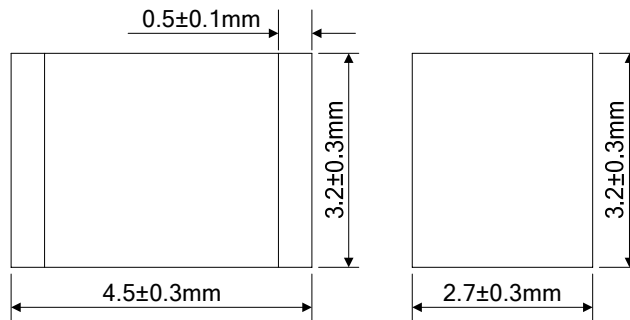
- High insulation resistance
- 4KV 10/700µs maximum surge rating in accordance with ITU-TK.21
- Ultra low capacitance (<1pF)
- Surface mounted gas arrester
- Size 4532(1812)
- 2.0KA /1KA surge capability tested with 8/20µs pulse as defined by IEC 61000-4-5
- Meets MSL level 1
- Storage and operating temperature: -40 ~ +85 °C



»Applications

- Communication equipment
- CATV equipment
- Test equipment
- Data lines
- Power supplies
- Telecom SLIC protection
- Broadband equipment
- ADSL equipment, including ADSL2+
- XDSL equipment
- Satellite and CATV equipment
- General telecom equipment

»Device Dimensions (Unit: mm)

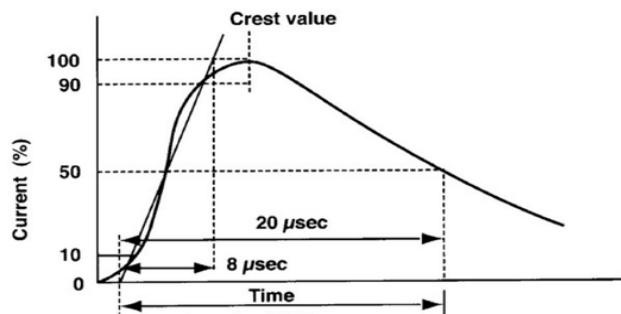


Recommended Pad Size

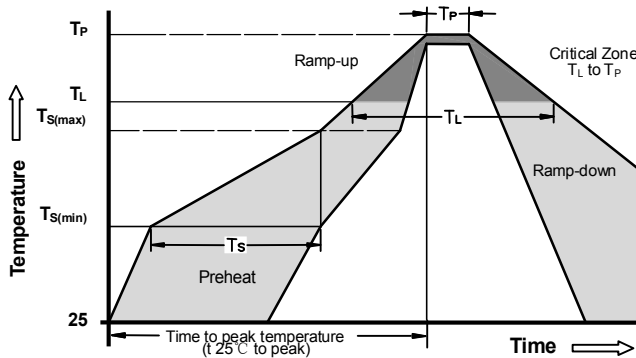
»ElectricalCharacteristics

| Part Number | DC Spark-over Voltage | Maximum Impulse Spark-over Voltage | Minimum Insulation Resistance | Maximum Capacitance | Impulse withstanding Voltage Capacity | Nominal Impulse Discharge Current |
|-------------|-----------------------|------------------------------------|-------------------------------|---------------------|---------------------------------------|-----------------------------------|
|             | @100V/S               | @1KV/ $\mu$ s                      |                               | 1 G $\Omega$        | @1MHz                                 | @10/700 $\mu$ s $\pm$ 5 times     |
| BTC750N     | 75V $\pm$ 30%         | 600V                               | at 25V DC                     | 1pF                 | 4KV                                   | 2.0KA                             |
| BTC900N     | 90V $\pm$ 30%         | 700V                               | at 50V DC                     | 1pF                 |                                       | 2.0KA                             |
| BTC151N     | 150V $\pm$ 30%        | 700V                               | at 50V DC                     | 1pF                 |                                       | 2.0KA                             |
| BTC201N     | 200V $\pm$ 30%        | 750V                               | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC231N     | 230V $\pm$ 30%        | 750V                               | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC301N     | 300V $\pm$ 30%        | 900V                               | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC351N     | 350V $\pm$ 30%        | 900V                               | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC401N     | 400V $\pm$ 30%        | 1000V                              | at 100V DC                    | 1pF                 | 4KV                                   | 2.0KA                             |
| BTC471N     | 470V $\pm$ 30%        | 1000V                              | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC501N     | 500V $\pm$ 30%        | 1000V                              | at 100V DC                    | 1pF                 |                                       | 2.0KA                             |
| BTC601N     | 600V $\pm$ 30%        | 1200V                              | at 100V DC                    | 1pF                 |                                       | 1.0KA                             |
| BTC801N     | 800V $\pm$ 30%        | 1600V                              | at 100V DC                    | 1pF                 |                                       | 1.0KA                             |
| BTC102N     | 1000V $\pm$ 30%       | 1800V                              | at 100V DC                    | 1pF                 |                                       | 1.0KA                             |

»Electrical Rating

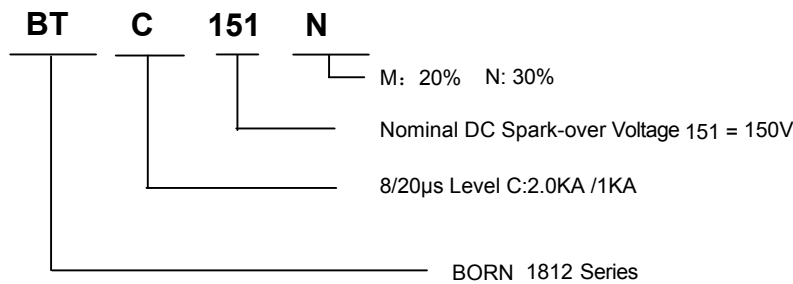
| Item                                     | Test Condition / Description   | Requirement                 |
|--|--|-----------------------------|
| <b>DC Spark-over Voltage</b>             | The voltage is measured with a slowly rate of rise $dv / dt=100V/s$  | To meet the specified value |
| <b>Impulse Spark-over Voltage</b>        | The maximum impulse spark-over voltage is measured with a rise time of $dv / dt=100V/\mu s$ or $1KV/\mu s$   |                             |
| <b>Insulation Resistance</b>             | The resistance of gas tube shall be measured each terminal each other terminal, please see above spec.   |                             |
| <b>Capacitance</b>                       | The capacitance of gas tube shall be measured each terminal to each other terminal. Test frequency: 1MHz   |                             |
| <b>Nominal Impulse Discharge Current</b> | The maximum current applying a waveform of 8/20 $\mu$ s that can be applied across the terminals of the gas tube. One hour after the test is completed, re-testing of the DC spark-over voltage does not exceed $\pm 40\%$ of the nominal DC spark-over voltage. Dwell time between pulses is 3 minutes.<br> |                             |

## »Recommended solderingprofile



|   |                                   |                    |
|---|-----------------------------------|--------------------|
| <b>Reflow Condition</b>   |                                   | Pb - Free assembly |
| <b>Pre Heat</b>   | -Temperature Min( $T_{s(min)}$ )  | 150°C              |
|   | -Temperature Max( $T_{s(max)}$ )  | 200°C              |
|   | - Time (min to max) ( $t_s$ )     | 60 -180 Seconds    |
| <b>Average ramp up rate ( Liquidus Temp <math>T_L</math>) to peak</b> |                                   | 3°C/second max     |
| <b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-upRate</b>      |                                   | 5°C/second max     |
| <b>Reflow</b>   | - Temperature ( $T_L$ )(Liquidus) | 217°C              |
|   | - Time (min to max) ( $t_s$ )     | 60 -150 Seconds    |
| <b>Peak Temperature(<math>T_P</math>)</b>                             |                                   | 260 +0/-5°C        |
| <b>Time within 5°C of actual peak Temperature (<math>t_p</math>)</b>  |                                   | 10 - 30 Seconds    |
| <b>Ramp-down Rate</b>   |                                   | 6°C/second max     |
| <b>Time 25°C to peak Temperature (<math>T_P</math>)</b>               |                                   | 8 minutes Max      |
| <b>Do not exceed</b>  |                                   | 260°C              |

## »Part Numbering



## »Cautions and warnings

- Gas discharge tubes (GDT) must not be operated directly in power supply networks.
- Gas discharge tubes (GDT) may become hot in case of longer periods of current stress (danger ofburning).
- Gas discharge tubes (GDT) may be used only within their specified values. In the event of overload, the head contacts may fail or the component may be destroyed.
- Damaged Gas discharge tubes (GDT) must not be re-used.

»Packaging

| Tape              | Items | Dimension (mm) |           |       |
|-------------------|-------|----------------|-----------|-------|
|                   |       | Spec.          | Tolerance |       |
| <p>A</p>          | W     | 12.00          | ±0.20     |       |
|                   | P0    | 4.00           | ±0.10     |       |
|                   | P1    | 8.00           | ±0.20     |       |
|                   | P2    | 2.00           | ±0.10     |       |
|                   | D0    | 1.45           | ±0.10     |       |
|                   | D1    | 1.00           | ±0.10     |       |
|                   | E     | 1.75           | ±0.10     |       |
|                   | F     | 5.50           | ±0.10     |       |
|                   | A0    | 3.80           | ±0.10     |       |
|                   | K0    | 3.20           | ±0.10     |       |
|                   | B0    | 4.90           | ±0.10     |       |
|                   | t0    | 0.40           | ±0.10     |       |
|                   | Reel  | D              | 330.00    | ±2.00 |
|                   |       | d              | 13.00     | ±0.50 |
|                   |       | L              | 16.00     | ±2.00 |
| t                 |       | 2.00           | ±0.20     |       |
| Quantity: 2500pcs |       |                |           |       |

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